

Additional file 1: Pagel's λ and tests of data independence ($\lambda = 0$) and of Brownian Motion ($\lambda = 1$). (a) for gastropods (n = 57 species, slugs included), and (b) for snails (n = 50 species; slugs excluded).

(a)	Trait	Observed λ	Probability of 0	Probability of 1
	Shell type*	0.882	<0.001	<0.001
	Breeding system	0.906	<0.001	<0.001
	Mode of reproduction	0.927	<0.001	<0.001
	Age at sexual maturity	0.881	<0.001	<0.001
	Longevity	0.908	<0.001	<0.001
	Habitat specificity	0.928	<0.001	<0.001

*three shell shape categories and slugs as an own category

(b)	Trait	Observed λ	Probability of 0	Probability of 1
	Maximum shell dimension	0.873	<0.001	<0.001
	Shell shape	0.875	<0.001	<0.001
	Breeding system	0.898	<0.001	<0.001
	Mode of reproduction	0.926	<0.001	<0.001
	Age at sexual maturity	0.853	<0.001	<0.001
	Longevity	0.898	<0.001	<0.001
	Habitat specificity	0.927	<0.001	<0.001